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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HAWKINS, CHERYL N

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 10/22/2002

14

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/483,117	GEORGE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Cheryl N Hawkins	1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 July 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 27-29 and 35-37 is/are allowed.
- 6) ☒ Claim(s) 9-11, 15-26, 30-33 and 38-48 is/are rejected.
- 7) ☒ Claim(s) 12-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>13</u> . | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 45 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 45 recites a heating element which is at least partially embedded in the front jaw of the apparatus. However, Claim 45 is dependent on Claim 42 which recites that the heating element is unembedded in the front jaw. For the purpose of examination, it will be assumed that heating element of Claim 45 is unembedded. Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamm et al. (US 3,982,991) in view of Karabut et al. (SU 1118535). Hamm et al. discloses a device for heating sealing two thermoplastic films together (abstract), the device comprising: front and rear opposing jaws (Figure 1, tool 1 and opposing tool 2) moveable between an open position defining a zone for inserting the two films between the front and rear jaws and a closed

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position in which the front and rear jaws are proximate each other to compress the two thermoplastic films together, the rear jaw including a resilient portion (Figure 1, pressure pad 10) facing the front jaw; a front jaw release sheet (Figure 1, layer 6) positioned between the insertion zone and the front jaw when the front and rear jaws are in the open position; and a heating element (Figure 1, wire 4) positioned between the front release sheet and the front jaw, wherein the front jaw release sheet is attached to the heating element when the front and rear jaws are closed or open position (Figure 1; column 2, lines 53-68; column 3, lines 1-28).

As to Claim 9, Hamm et al. does not disclose having a heat sealing device in which the front jaw release sheet engages the heating element when the front and rear jaws are in the closed position and disengages from the heating element when the front and rear jaws are in the open position. Karabut et al. (SU 1118535) discloses a heat sealing apparatus (Figure 1) in which the front jaw release sheet (Figure 1, anti-adhesion liner 4) engages the heating element (Figure 1, band heater 3) when the front and rear jaws are in the closed position and disengages from the heating element when the front and rear jaws are in the open position (Figure 1, buffer container 6). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the front jaw release sheet of Hamm et al. to engage the heating element when the front and rear jaws are in the closed position and disengage from the heating element when the front and rear jaws are in the open position as suggested by Karabut et al. to prevent continued contact between the front jaw release sheet and the heating element thereby reducing damage to the front jaw release sheet.

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As to Claim 15, Hamm et al. discloses an apparatus in which the surface of the resilient portion of the rear jaw facing the front jaw includes a release characteristic (Figure 1, pressure pad 10 and layer 12).

As to Claim 16, Hamm et al. discloses an apparatus which includes a rear jaw release sheet adjacent to the resilient portion of the rear jaw (Figure 1, pressure pad 10 and layer 12)

5. Claims 10, 11, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamm et al. (US 3,982,991) and Karabut et al. (SU 1118535) as applied to claim 9 above, and further in view of "The Wiley Encyclopedia of Packaging Technology". As to Claims 10 and 11, Hamm et al. is silent as to a device in which the front jaw release sheet includes an unreinforced release material. It is well known and conventional in the heat sealing apparatus art, as disclosed in "The Wiley Encyclopedia of Packaging Technology", for impulse sealers to contain release coverings that can include reinforced materials, such as silicone-rubber-coated fiberglass, or release coverings, such as Teflon-coated polyimide film, that include unreinforced release material consisting of fluoroplastic material, i.e. Teflon or polytetrafluoroethylene (page 575, column 2, lines 5-9; Figure 4) to prevent plastic films being sealed and/or severed from sticking to elements of the apparatus. It would have been readily apparent to one of ordinary skill in the art at the time of the invention that the heat sealing and severing apparatus of Hamm et al. could be modified to include a unreinforced release covering on the heating element to prevent the plastic films being sealed and/or severed from sticking to elements of the apparatus and yet retain its capability of effectively sealing and severing thermoplastic films.

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As to Claim 17, Hamm et al. is silent as to a device in which the rear jaw release sheet includes an unreinforced fluoroplastic release material. It is well known and conventional in the heat sealing apparatus art, as disclosed in "The Wiley Encyclopedia of Packaging Technology", for impulse sealers to contain release coverings that can include reinforced materials, such as silicone-rubber-coated fiberglass, or release coverings, such as Teflon-coated polyimide film, that include unreinforced release material consisting of fluoroplastic material, i.e. Teflon or polytetrafluoroethylene (page 575, column 2, lines 5-9; Figure 4) to prevent plastic films being sealed and/or severed from sticking to elements of the apparatus. It would have been readily apparent to one of ordinary skill in the art at the time of the invention that the heat sealing and severing apparatus of Hamm et al. could be modified to include a unreinforced release covering on the rear jaw to prevent the plastic films being sealed and/or severed from sticking to elements of the apparatus and yet retain its capability of effectively sealing and severing thermoplastic films.

6. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamm et al. (US 3,982,991) and Karabut et al. (SU 1118535) as applied to claim 9 above, and further in view of Kochmer et al. (US 3,235,122). As to Claims 18-20, Hamm et al. is silent as to a device in which the cross-sectional thickness of the heating element is no less than about twice the cross-sectional thickness of the resilient portion. Kochmer et al. discloses a heat sealing and severing device in which the cross-sectional thickness of the heating element is no less than about twice the cross-sectional thickness of the resilient portion (Figure 3). One of ordinary skill in the art at the time of the invention would recognize that the thickness of the resilient portion of the front

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jaw illustrated in the apparatus of Hamm et al. is exemplary and that the apparatus of Hamm et al. could function effectively with a thinner resilient pad such as that disclosed by Kochmer et al.

7. Claims 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kochmer et al. (US 3,235,122) in view of Karabut et al. (SU 1118535) and "The Wiley Encyclopedia of Packaging Technology". Kochmer et al. discloses a device for heating sealing two thermoplastic films together, the device comprising: front and rear opposing jaws (Figure 3, support bar 10 and counter-pressure bar 28) moveable between an open position defining a zone for inserting the two films between the front and rear jaws and a closed position in which the front and rear jaws are proximate each other to compress the two thermoplastic films together, the rear jaw including a resilient portion (Figure 3, silicone rubber pad 30) facing the front jaw and a heating element (Figure 3, wire 16) positioned in the front jaw,

As to Claim 9, Kochmer et al. is silent as to a front jaw release sheet. It is well known and conventional in the heat sealing apparatus art, as disclosed by "The Wiley Encyclopedia of Packaging Technology" (page 575, column 2, lines 5-9; Figure 4), for heat sealing machines to have release coverings composed of reinforced materials, i.e. silicone-rubber-coated fiberglass, or unreinforced materials such as polyimide film to prevent the plastic films being sealed and/or severed from sticking to elements of the apparatus. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the heat sealing and severing apparatus of Kochmer et al. to include a release covering on the heating element to prevent the plastic films being sealed and/or severed from sticking to elements of the apparatus.

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As to Claim 9, Kochmer et al. is does not disclose having a heat sealing device in which the front jaw release sheet engages the heating element when the front and rear jaws are in the closed position and disengages from the heating element when the front and rear jaws are in the open position. Karabut et al. (SU 1118535) discloses a heat sealing apparatus (Figure 1) in which the front jaw release sheet (Figure 1, anti-adhesion liner 4) engages the heating element (Figure 1, band heater 3) when the front and rear jaws are in the closed position and disengages from the heating element when the front and rear jaws are in the open position (Figure 1, buffer container 6). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Kochmer et al. to include a front jaw release sheet which engages the heating element when the front and rear jaws are in the closed position and disengages from the heating element when the front and rear jaws are in the open position as suggested by Karabut et al. to prevent continued contact between the front jaw release sheet and the heating element thereby reducing damage to the front jaw release sheet.

As to Claim 21, Kochmer et al. discloses an apparatus in which the heating element is embedded in the front jaw when the front and rear jaws are in the open position.

As to Claim 48, Kochmer et al. is silent as to the percentage of the surface area of the heating element that the release sheet conforms to upon closure of the front and rear jaws. When modifying the heat sealer of Kochmer et al. to include the use of a release sheet covering the heating element, the front release sheet would conform to greater than 20% of the surface of the heating element that is within the transverse width of the thermoplastic films.



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8. Claims 22-26 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamm et al. (US 3,982,991) in view of Kochmer et al. (US 3,235,122). Hamm et al. discloses a device for simultaneously heat sealing and severing at least two thermoplastic films (abstract), the device includes front and rear opposing jaws (Figure 1) moveable between an open position defining a zone for inserting at least two films between the front and rear jaws and a closed position in which the front and rear jaws are proximate each other, the rear jaw including a resilient portion (Figure 1, pressure pad 10) facing the front jaw, the resilient portion having a given cross-sectional thickness; a front jaw release sheet (Figure 1, layer 6) positioned between the insertion zone and the front jaw when the front and rear jaw are in the open position; and an unembedded heating element (Figure 1, wire 4) positioned between the front jaw release sheet and the front jaw.

As to Claims 22-25, Hamm et al. is silent as to a device in which the cross-sectional thickness of the heating element is no less than about twice the cross-sectional thickness of the resilient portion. Kochmer et al. discloses a heat sealing and severing device in which the cross-sectional thickness of the heating element is no less than about twice the cross-sectional thickness of the resilient portion (Figure 3). One of ordinary skill in the art at the time of the invention would recognize that the thickness of the resilient portion of the front jaw illustrated in the apparatus of Hamm et al. is exemplary and that the apparatus of Hamm et al. could function effectively with a thinner resilient pad such as that disclosed by Kochmer et al.

As to Claim 30, Hamm et al. discloses a device in which the surface of the resilient portion (Figure 1, pressure pad 10) of the rear jaw facing the front jaw includes a release characteristic (Figure 1, layer 12).

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As to Claim 31, Hamm et al. discloses a device in which a rear jaw release sheet (Figure 1, layer 12) is positioned adjacent to the resilient portion (Figure 1, pressure pad 10) of the rear jaw.

9. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamm et al. (US 3,982,991) and Kochmer et al. (US 3,235,122) as applied to claim 31 above, and further in view of "The Wiley Encyclopedia of Packaging Technology". Hamm et al. is silent as to a device in which the rear jaw release sheet includes an unreinforced release material. It is well known and conventional in the heat sealing apparatus art, as disclosed in "The Wiley Encyclopedia of Packaging Technology", for impulse sealers to contain release coverings that can include reinforced materials, such as silicone-rubber-coated fiberglass, or release coverings, such as Teflon-coated polyimide film, that include unreinforced release material consisting of fluoroplastic material, i.e. Teflon or polytetrafluoroethylene (page 575, column 2, lines 5-9; Figure 4) to prevent plastic films being sealed and/or severed from sticking to elements of the apparatus. It would have been readily apparent to one of ordinary skill in the art at the time of the invention that the heat sealing and severing apparatus of Hamm et al. could be modified to include a unreinforced release covering to prevent the plastic films being sealed and/or severed from sticking to elements of the apparatus and yet retain its capability of effectively sealing and severing thermoplastic films.

10. Claims 33 and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergevin (US 4,981,546) in view of "The Wiley Encyclopedia of Packaging Technology". As to

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Claims 33 and 39, Bergevin discloses a device for heat sealing thermoplastic films together, the device comprising: front and rear opposing jaws moveable between an open position defining a zone for inserting two films between the front and rear jaws and a closed position in which the front and rear jaws are proximate to each other to compress the thermoplastic films together, the rear jaw including a resilient portion facing the front jaw; a front jaw release sheet positioned between the insertion zone and the front jaw when the front and rear jaws are in the open position, the front jaw release sheet including a release material; and a heating element positioned between the front jaw release sheet and the front jaw. Bergevin also discloses the heat sealing apparatus as having a rear jaw release sheet adjacent to the resilient portion of the rear jaw and wherein the heating element is partially embedded in the resilient portion of the rear jaw during operation of the heat sealer (Figure 1; column 2, lines 53-68; column 3, lines 1-28).

As to Claims 33, 38, and 40, Bergevin is silent as to the front jaw or rear jaw release sheet including an unreinforced release material. It is well known and conventional in the heat sealing apparatus art, as disclosed in "The Wiley Encyclopedia of Packaging Technology", for impulse sealers to contain release coverings that can include reinforced materials, such as silicone-rubber-coated fiberglass, or release coverings, such as Teflon-coated polyimide film, that include unreinforced release material consisting of fluoroplastic material, i.e. Teflon or polytetrafluoroethylene (page 575, column 2, lines 5-9; Figure 4) to prevent plastic films being sealed and/or severed from sticking to elements of the apparatus. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide an unreinforced material as the release sheet in the heat sealing device of Bergevin; the use of unreinforced materials such as polyimide films being well established in the heat sealing apparatus art.

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11. Claims 33 and 41 rejected under 35 U.S.C. 103(a) as being unpatentable over Kochmer et al. (US 3,253,122) in view of "The Wiley Encyclopedia of Packaging Technology". Kochmer et al. discloses a device for simultaneously heat sealing and severing at least two thermoplastic films (column 1, lines 9-12), the device includes front and rear opposing jaws (Figure 3) moveable between an open position defining a zone for inserting at least two films between the front and rear jaws and a closed position in which the front and rear jaws are proximate each other (column 1, lines 17-19), the rear jaw including a resilient portion (silicone rubber pad 30) facing the front jaw and a heating element (heating element 16) positioned in the top portion of the front jaw.

As to Claim 33, Kochmer et al. is silent as to a front jaw release sheet, which includes an unreinforced release material. It is well known and conventional in the heat sealing apparatus art, as disclosed in "The Wiley Encyclopedia of Packaging Technology", for impulse sealers to contain release coverings that can include reinforced materials, such as silicone-rubber-coated fiberglass, or release coverings, such as Teflon-coated polyimide film, that include unreinforced release material consisting of fluoroplastic material, i.e. Teflon or polytetrafluoroethylene (page 575, column 2, lines 5-9; Figure 4) to prevent plastic films being sealed and/or severed from sticking to elements of the apparatus. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the heat sealing and severing apparatus of Kochmer et al. to include a unreinforced release covering on the heating element to prevent the plastic films being sealed and/or severed from sticking to elements of the apparatus.

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As to Claim 41, Kochmer et al. discloses a heating element (Figure 3, heating element 16), which is at least partially embedded in the front jaw when the front and rear jaws are in the open position.

12. Claims 42-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamm et al. (US 3,253,122) in view of Kochmer et al. (US 3,235,122). Hamm et al. discloses a device for simultaneously heat sealing and severing at least two thermoplastic films (abstract), the device includes front and rear opposing jaws (Figure 1, tool 1 and opposing tool 2) moveable between an open position defining a zone for inserting at least two films between the front and rear jaws and a closed position in which the front and rear jaws are proximate each other, the rear jaw including a resilient portion (Figure 1, pressure pad 10) facing the front jaw, the resilient portion having a given cross-sectional thickness; a front jaw release sheet (Figure 1, layer 6) positioned between the insertion zone and the front jaw when the front and rear jaws are in the open position; and an unembedded heating element (Figure 1, wire 4) positioned between the front jaw release sheet and the front jaw.

As to Claims 42-45, Hamm et al. is silent as to a device in which the cross-sectional thickness of the heating element is no less than about twice the cross-sectional thickness of the resilient portion. Kochmer et al. discloses a heat sealing and severing device in which the cross-sectional thickness of the heating element is no less than about twice the cross-sectional thickness of the resilient portion (Figure 3). One of ordinary skill in the art at the time of the invention would recognize that the thickness of the resilient portion of the front jaw illustrated in

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the apparatus of Hamm et al. is exemplary and that the apparatus of Hamm et al. could function effectively with a thinner resilient pad such as that disclosed by Kochmer et al.

As to Claim 46, Hamm et al. discloses a device in which the surface of the resilient portion (Figure 1, pressure pad 10) of the rear jaw facing the front jaw includes a release characteristic (Figure 1, layer 12).

As to Claim 47, Hamm et al. discloses a device in which a rear jaw release sheet (Figure 1, layer 12) is positioned adjacent to the resilient portion (Figure 1, pressure pad 10) of the rear jaw.

***Allowable Subject Matter***

13. The indicated allowability of claims 9-21 and 48 is withdrawn in view of the newly discovered reference(s) to Karabut et al. (SU 1118535). Rejections based on the newly cited reference(s) follow.

14. Claims 1-6 are allowed.

15. The following is an examiner's statement of reasons for indicating allowable subject matter: As to Claim 1, the prior art of record to Bergevin (US 4,981,546) discloses a device for heating sealing at least two thermoplastic films together, the device comprising front and rear opposing jaws movable between an open position defining a zone for inserting the two films between the front and rear jaws and a closed position in which the front and rear jaws are proximate each other to compress the two thermoplastic films together, the rear jaw including a resilient portion facing the front jaw, the resilient portion having a given cross-sectional

thickness; a rear jaw release sheet adjacent to the resilient portion of the rear jaw, the rear jaw release sheet including a reinforced release material; a front jaw release sheet positioned between the insertion zone and the front jaw when the front and rear jaws are in the open position, the front jaw release sheet including a reinforced material; a heating element positioned between the front jaw release sheet and the front jaw, the heating element having a cross-sectional thickness less than 0.55 times the cross-sectional thickness of the resilient portion (Figure 1; column 2, lines 53-68; column 3, lines 1-28).

The prior art of record to Bergevin does not teach including an unreinforced release material as the release material for the front and rear jaws. The conventional prior art disclosed in "The Wiley Encyclopedia of Packaging Technology" teaches that impulse sealers, such as the apparatus of Bergevin, contain release coverings that can be composed of reinforced material i.e. silicone-rubber-coated fiberglass or unreinforced material such as polyimide film (page 575, column 2, lines 5-9; Figure 4). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide an unreinforced material as the release sheet in the heat sealing device of Bergevin; the use of unreinforced materials such as polyimide films being well known and conventional in the heat sealing apparatus art.

The prior art of record to Bergevin does not teach a heating element having a cross-sectional thickness no less than about 0.55 times the cross-sectional thickness of the resilient portion. The prior art of record to Kochmer et al. discloses a heat sealing and severing device in which the cross-sectional thickness of the heating element (Figure 3, heating element 16) is greater than 0.55 times the cross-sectional thickness of the resilient portion (silicone rubber pad 30). One of ordinary skill in the art at the time of the invention would readily recognize that a

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heat sealing device having a heating element which is less than or greater than 0.55 times the cross-sectional thickness of the resilient portion would produce effective heat seals as suggested by Bergevin and Kochmer et al.

The prior art of record to Karabut (SU 1118535) discloses a heat sealing apparatus in which the both ends of the front jaw release sheet are attached to the front jaw to disengages the front jaw release sheet from the heating element when the front and rear jaw are in the open position (Figure 1).

The prior art of record does not teach or provide any motivation for the heat sealing device having at least one recoiler having a first end attached to the front jaw release sheet and a second end attached to the front jaw, wherein the recoiler disengages the front jaw release sheet from the heating element when the front and rear jaw are in the open position.

16. Claims 7 and 8 are allowed.

17. The following is a statement of reasons for the indication of allowable subject matter: As to Claim 7, the prior art of record to Bergevin (US 4,981,546) teaches a heat sealing device which is capable of performing a method of simultaneously sealing and severing two thermoplastic films, the method comprising: inserting the two thermoplastic films in the insertion zone of the device; moving the front and rear jaws to the closed position whereby the two thermoplastic films are pressed together between the front and rear jaws; applying an electrical impulse to the heating element to increase the temperature of the heating element to a point sufficient to simultaneously sever and heat seal the two thermoplastic films; and



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discontinuing the electrical impulse to the heating element while the front and rear jaws are in the closed position to set the heat seal (Figure 1; column 2, lines 53-68; column 3, lines 1-28).

However, the prior art of record does not teach performing this heat sealing method with the heat sealing device as described in claim 1

18. Claims 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

19. The following is a statement of reasons for the indication of allowable subject matter: As to Claim 12, the prior art of record to Hamm et al. (US 3,982,991) does not teach or suggest any motivation for a heat sealer to have at least one spacer attached to the front jaw release sheet, wherein the front jaw release sheet is disengaged from the heating element when the front and rear jaws are in the open position.

20. Claims 27-29 are allowed.

21. The following is a statement of reasons for the indication of allowable subject matter: As to Claims 27, the prior art of record to Kochmer et al. discloses a device for simultaneously heat sealing and severing at least two thermoplastic films (column 1, lines 9-12), the device includes front and rear opposing jaws (Figure 3) moveable between an open position defining a zone for inserting at least two films between the front and rear jaws and a closed position in which the front and rear jaws are proximate each other (column 1, lines 17-19), the rear jaw including a resilient portion (silicone rubber pad 30) facing the front jaw, the resilient portion having a given

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cross-sectional thickness and a heating element (heating element 16) positioned between the front jaw release sheet and the front jaw, the heating element having a cross-sectional thickness no less than about 0.55 times the cross-sectional thickness of the resilient portion (Figure 3).

Kochmer et al. is silent as to a front jaw release sheet, but it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the heat sealing and severing apparatus of Kochmer et al. to include a release covering on the heating element to prevent the plastic films being sealed and/or severed from sticking to elements of the apparatus.

The prior art of record to Kochmer et al. does not teach or suggest any motivation for a heat sealer to have at least one spacer attached to the front jaw release sheet, wherein the front jaw release sheet is disengaged from the heating element when the front and rear jaws are in the open position.

22. Claims 35-37 are allowed.

23. The following is a statement of reasons for the indication of allowable subject matter: As to Claim 35, the prior art of record to Bergevin discloses a device for heat sealing thermoplastic films together, the device comprising: front and rear opposing jaws moveable between an open position defining a zone for inserting two films between the front and rear jaws and a closed position in which the front and rear jaws are proximate to each other to compress the thermoplastic films together, the rear jaw including a resilient portion facing the front jaw; a front jaw release sheet positioned between the insertion zone and the front jaw when the front and rear jaws are in the open position, the front jaw release sheet including a release material; and a heating element positioned between the front jaw release sheet and the front jaw. Bergevin

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does not disclose the front jaw or rear jaw release sheet including an unreinforced release material. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide an unreinforced material as the release sheet in the heat sealing device of Bergevin; the use of unreinforced materials such as polyimide films being well established in the heat sealing apparatus art.

The prior art of record to Bergevin does not teach or suggest any motivation for a heat sealer to have at least one spacer attached to the front jaw release sheet, wherein the front jaw release sheet is disengaged from the heating element when the front and rear jaws are in the open position.

#### ***Response to Arguments***

24. In response to the applicant's amendment to Claim 48, the rejection of Claim 48 under 35 USC 112, second paragraph, has been withdrawn.

25. Applicant's arguments with respect to claims 22-26 and 30-3242-47, have been considered but are moot in view of the new ground(s) of rejection.

26. In response to the applicant's arguments that Wiley fails to teach an unreinforced release material containing essentially a fluoroplastic material, the Examiner disagrees. Wiley discloses an unreinforced release sheet, such as Teflon-coated polyimide film, which includes an unreinforced release material consisting essentially of fluoroplastic material, i.e. Teflon or polytetrafluoroethylene (page 575, column 2, lines 5-9; Figure 4).

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***Conclusion***

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl N. Hawkins whose telephone number is (703) 306-0941.

The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone numbers for the organization where the application or proceeding is assigned is (703) 872-9310 for regular communications or (703) 872-9311 for After-Final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone numbers is (703) 308-0661.

Cheryl N. Hawkins

*Cheryl N. Hawkins* 10/21/02

October 21, 2002

*R. Crispino*

RICHARD CRISPINO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700